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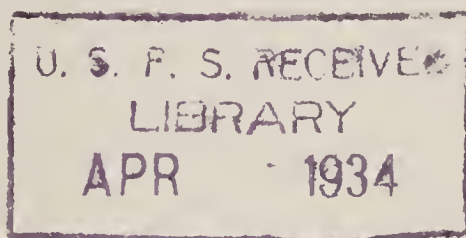
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EXECUTIVE AND PERSONNEL  
**MANAGEMENT**  
ON THE  
NATIONAL FORESTS



A MEDIUM FOR THE EXCHANGE OF IDEAS AND  
EXPERIENCES BY OPERATING EXECUTIVES  
FOR THE BETTERMENT OF THE  
SERVICE

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# WHAT THE RANGE MANAGER SHOULD KNOW ABOUT THE RANGE

*by*

JOHN H. HATTON

"What the range manager should know about the range" is the question asked of me. I will add another: "What the range manager should be or do." One is about as important, in my judgment, as the other; and the two combine in what we may consider the well-rounded product.

I will discuss the second question first. I do this because of its significance and importance in our early as well as our present-day National Forest range administration; also because with the second question disposed of the first becomes easier. I take it that in forest administration study courses "What the range manager should know about the range" refers particularly to educational subjects and qualifications and technical knowledge, and to the necessary training and ability to apply them.

First, I should say that the range manager should have or should acquire a live and sincere interest in livestock and the range management subject in its various phases and relations. Such interest does not "come natural" or is not inherent in a large percentage of newly made foresters whose experience and contacts have led their thinking into other fields. This is a perfectly natural result. That is one reason study courses have been developed within the Service, in an attempt more quickly and better to prepare beginning foresters for the day-to-day work before them. The more important range administrative jobs or services will naturally gravitate to those who have, or are so constituted as to acquire, that interest. They *should* gravitate to men of those qualifications. They should in the interests of human and resource harmony, of more rapid progress with the livestock people in range and livestock management, and in our big and growing job of co-ordination in the management of the various National Forest resources.

Such interest, then, should obviously extend, at least in a measure, to the man engaged in the livestock business, to his ranch set-up, to his animals, to his year-'round operation, and to his various interests and problems. In range management we are dealing with human beings and other animated life in their relations to and dependence upon plants, soils, water, and other elements which make up our stock in trade. That fact in itself invites special human interest and understanding. There has been perhaps something of a tendency of late toward confining our interest in the National Forests more to forests and forage and other forest interests and to more mechanical determinations in range management. The soil and vegetative cover are, of course, the big things in mind and in hand, but the stockman's interest and problem is probably two-thirds to one-half outside the Forest boundaries.

Then why bother to go beyond our own domain, we may say, to extend or expand our interest? My thought is that while range management is with us



we cannot qualify as well-rounded range managers until we know more than the summer phase of the range problem. That interest and knowledge and those qualifications in the early history of National Forest range management carried the Service through the pioneer stages and over the rough places, and laid the foundations for a large share of such progress as has been made in range management up to this time. One does not have to be anchored in the past to recognize that, and he does not have to forget that chapter in National Forest history to be able to grasp and promote ideas developed from experience and research in our modern, more progressive management, so called. Qualifications such as I have mentioned were more necessary then, perhaps, than they are now, but they will continue to gauge in pretty large degree the full measure of the range manager's success. Our ordinary work programs and travel schedules need not be materially altered for this. Interest will find a way without that. But to administer our National Forest ranges, for instance, with little or no first-hand knowledge of millions of acres of public domain or other lands used as necessary complements to Forest ranges, or with little or no knowledge or first-hand contact with our patrons and their problems beyond Forest boundaries, make for impediments that are unnecessary and that can be avoided just as well as not. That statement is made strong to stress a point, and not necessarily to state a general condition.

If these things become a substantial part of our foundation the rest will come easier. And they need not be called too elementary in our present stage of progress. They are credentials that will always stand the range manager in good stead as long as we have range and livestock to manage. We may have to go through something of a listening or inquisitive period at first, if we should be "green" or lacking in experience, until we gradually acquire confidence in ourselves and the stockmen acquire confidence in us; and when they do that we are pretty well "over the hill" in any programs or plans for more refined management, as we term it.

What are the sources of information and what are the contacts by which we can strengthen our qualifications under this second question? Perhaps enough of them have been indicated or mentioned. We might add, for instance, livestock, periodicals such as the "Producer," official organ of the American National Livestock Association, one of the best of its kind put out; and the National Woolgrower, official organ of the National Woolgrowers Association. These and others go the rounds of many of the Forests, or are available at very moderate subscription rates. They deal pretty largely with Markets and the financial aspects of the livestock industry, but they take us to where our Forest patrons and our livestock people live from day to day. Then there are books like "Western Grazing Grounds and Forest Ranges," by Barnes, bulletins and other publications that will add to our store of information. The point is to improve opportunities to review them. There are also local ranch and range associations and contacts with livestock organizations, county fairs and what not, all offering a wide field of inquiry and information and opportunities for co-operation and mutual understanding. There is not space to elaborate, but the suggestion in all of this is simply to develop and keep alive interest in

something which at present constitutes, in a way, our most universal National Forest activity—our range and livestock management.

There is also presented today a special need for a more intimate study of the range in its relation to other resources and the broader aspects of Conservation.

As to question No. 1, the main subject of this discussion:

This may be divided into two broad classes:

1. Administrative knowledge.
2. Technical knowledge.

I would dispose of the first by inviting attention to the National Forest grazing regulations and instructions and the policies therein embodied; to range management handbooks and range management plans. These have been developed and revised and worked over again from time to time with painstaking care through more than a quarter of a century of intimate experience in the handling of nearly 100,000,000 acres of mountain and foothill pasture lands. They are not static, however, but embody the best progressive thought and experience to date. The grazing regulations and policies have been developed, moreover, in co-operation with National, State and local livestock groups and through intimate contact with the individual stockman himself in the consideration of an intensely practical business.

There is nothing more practical and intimate than dealing with money values, and present utilities. Call it bread and butter if we wish, but a large element in the National Forest regions is vitally interested in what we do with this range resource today and tomorrow.

The regulations and policies have also been developed with the help of foresters deeply grounded in forest and Silvicultural knowledge and practice. Therefore the range manager, as a part of his equipment, should keep up on the grazing regulations with special reference to those which have particularly to do with range and livestock management and grazing policies. (Regulation G-12, "Range Management," and G-13, "Livestock Management," for instance.)

As to technical knowledge, the forest schools are strengthening their courses in administrative subjects and in specialized studies, such as botany, ecology, biology or wild life, and other subjects. They provide a good part of the forester's background. They should not be forgotten or set aside on graduation. The range manager should be on speaking terms with his forage—he should, anyway, know what I will call the "sir" (generic) and the common names of the important forage groups. It is not so necessary to know what I will call "first" or species names. We have attempted an illustrated simple pocket identification handbook to make it easier for the stockman and the forest administrator to become acquainted with forage groups and species and thus increase their interest and working knowledge. Some day that may be accomplished. We hope soon, because it is needed. But a knowledge of the forage groups and their relative forage value is very desirable to the range



manager, no matter how it may be acquired. He can go beyond that if he wants to, certainly, and without harm if his interest so leads.

There is developing a new school of thought on range utilization. In its present stage it seems to advocate more or less mechanical measures to determine proper utilization. It presumes we have at least enough technical and empirical knowledge to agree in advance upon standards of utilization for different types and sites of range.

Then there is the older school, which urges conservatism in forage utilization as its standard. This school takes more into account the many variant factors which have to do with practical every-day problems in prescribing and adhering to any standards that may be more or less arbitrarily set up. It argues that a cow's appetite and its incisors cannot be controlled and regulated like clippers in the hands of a range expert working with quadrats in clipping experiments. In conservatism, it argues, is present safety and insurance against injury and abuse pending refinements in plant studies through definite experimentation. It alleges that range administrators have not leaned far enough toward conservatism in range practice, but it recognizes there are many practical difficulties in sweeping changes. It urges that mechanical means of control, such as range fences, water developments, poisonous plant and rodent control, class grazing and rotation, salting and other plans in physical control of animals, etc., as the first steps in bringing about better control, distribution, and proper utilization. Sample plot studies and other observations such as will measure and *record* the changes that may be taking place, under current conditions of stocking and range use, are an essential part in all this. It advocates the use of broad indicators, such as the disappearance of willow growth along streams as an evidence of too heavy grazing or perhaps a grazing contribution to erosion and the lowering of water tables. It uses the absence of reproduction in aspen and in the conifer types as possible indicators of too heavy sheep grazing, or that one class of grazing has been continued too long on that particular unit. It holds tenaciously to the idea that the greatest single factor in range and plant protection is to avoid too early use by giving the forage at least two or three weeks' start before opening the season to grazing. It watches for seed production in the more important range species and seeks to insure that at least 25 per cent of the palatable and important species are permitted to bear seed in the average season. And it builds unit management plans which set up the items and seasonal activities indicated to accomplish these objectives as far as may be currently practical. Where these steps are especially limiting, more and yet more conservatism in use is the watchword until more physical control can be worked out and refinements applied with safety. Meantime there may be spots of range that do not get used to the last ounce of forage considered usable, and our margins of safety will not be crowded to the last inch. Maybe our wild life and certain other interests will appreciate that, however, as well as the permanent and provident range permittee.

Both schools are good, because their ultimate objectives are in the main

identical. We consider the second school of thought the more practical in range application at the present stage of progress and until better physical control is accomplished and definite research adds to our working knowledge.

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*Relation of Efficient Production to Morale in the CCC Camps:* By E. W. Lovelidge.

A, probably the, main clash in opinion between officers in many of the ECW camps last summer was on the question "how can the morale of the enrolled boys be raised and held to a fine, high level?"

Having in mind that the President stated in his message to Congress when introducing the bill authorizing the camps: "more important, however, than the material gains, will be the moral and spiritual value of such work," many officers—both army and Forestry—have held that the work is distinctly a secondary consideration; desirable, but not enough so as to interfere seriously with providing comfortable, attractive camps, and sports and other forms of recreation and entertainment. In this manner, together with inspirational talks, the boys would be kept in good humor and high spirits, not marred by hard work, that may at times be strenuous and leave the boys tired and dirty at the close of the day. And, besides, not much should be expected for a daily wage of only one dollar. This group does not admit that pampering is their guiding principle on which a high morale is to be sought; nor is there any conscious aspiration to develop the camps into glorified Boy Scout affairs. However, no clear-cut definition of their point of view has to my knowledge ever been made, and very likely the foregoing attempt to describe the general trend—rather than the extreme—in attitude of this group is inadequate.

Avoiding again the points of view of extremists, the other group of official opinion has held that morale is most readily engendered and most easily retained through the feeling of satisfaction and accomplishment that comes through the performance of work well done. That, provided with good food and reasonably decent quarters, other things being equal, the morale of the camp is in direct ratio to its production in useful work. Inspectors who are in a position to make comparisons repeatedly find this to be so. A Plumas side camp, for example, which has particularly impressed several inspectors with the very evident excellence of its morale, also is impressive not only in the quantity of its truck trail construction, but because the enrollees so repeatedly and proudly speak of the "1500 feet we got today; 1400 yesterday, and we ought to do 1700 tomorrow. Last week we reached Rogers Pass, our weekly objective, by Thursday night. The boss has set up a stiff one for this week, but watch us eat it up." Some time before I arrived even the doctor had moved in with this bunch of boys, as he preferred their side camp, with its wide-awake attitudes, to the greater comforts of the main headquarters. Which does not mean that the main camp was not of average high calibre.

There is also as vividly in mind the camp of New York boys for whom the officials had been very compassionate on account of the lack of ordinary



opportunities and dismal environment which these enrollees had so far had in their lives. Unusual efforts had been made to make them happy by following in general the tactics advocated by the first group of official opinion described above. A step farther—approaching the pampering stage—was, however, taken in this case. Serious efforts were made to get a reasonable amount of field work done, but the principal emphasis was placed on other means of making the boys happy and contented. Their reaction, with much unoccupied time on their hands, was to become wilder about the camp and more worthless on the job. The situation became increasingly bad until a change was made in officials and in the manner of handling the productive end of the work. It was a difficult job then to convert their attitude into one that was reasonably satisfactory from any point of view, including their own. It had been done fairly well, however, by the time I reached the camp, with the point of view of the second group of official opinion now thoroughly accepted by the responsible officers.

A John Day pamphlet\*, in which somewhat similar and older camps in Nichols and Glaser, The John Day Co., New York—25c. Germany, Switzerland, Holland and England are described and commented upon, also holds in expressions such as are given below that, other conditions being equal, the enrollees are happiest in the camps where the most and best work is being done. The pamphlet is worth reading by everyone having much to do with the CCC camps or with the conditions which make them a desirable type of project. It brings out among other angles of thought that a normal group of men cannot move forward without the inspiration of a conscious ideal. That discouragement and idleness have a devastating effect on their morale, and that countless thousands have suffered the loss of an idealism which is vital. In order to regain that idealism the task is one of reconditioning and rehabilitation. But "human beings do not live by bread alone," and although small payments may be made them month after month, and they may be fed and clothed, nevertheless great masses may be plunged into hopeless despair because they cannot satisfy their inherent urge to do something useful. This is particularly true of many young men who reached maturity about the time the depression began, and who have had to watch their young manhood pass away without bringing them any useful or interesting occupation. The lives of many of them have been seemingly devoid of meaning and purpose.

In view of the foregoing and other considerations, it came about quite naturally that work camps were established first at Colburn, Hanover, in 1925, and in increasing numbers and in other countries since that date. As reported in more detail in the pamphlet above referred to: "The morale of the camp centers around the *progress of the work project, for this is the basic activity*. Physical labor is a necessary ingredient in a well-balanced life. . . . It gives the participant an assurance of utility as he sees the job progress day by day, and, in its physical and mental effects, it provides a healthy antidote. . . . Their knowledge comes from actual experience and their aspirations are dictated by concrete and pressing needs. Yet if the work, which remains the basic factor in the make-up of a camp, does not appeal to the worker as a means of im-

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\* Work Camps for America. The German Experience and the American Opportunity.—

proving himself, it has taken on a new significance, the conception of service as distinct from labor."

As has been the policy with the camps in America, the work undertaken in the European camps described in this booklet must be of public utility and supplementing work ordinarily carried on. The government provides sustenance for all young unemployed between the ages of 18 and 25. And, indicative of the policy that may continue in effect in this country, Nichols and Glaser note that "The government experiment (in Germany) proved so successful that it voted for the continuation of the work in 1932, and has definitely committed itself to the work camp as a method of caring for the young unemployed. The success of the camp is shown by the resolutions, invariably passed by overwhelming majorities of the members, asking for their continuation. It is a method of relief which is satisfactory and beneficial to the unemployed, as it gives him the opportunity to serve the nation, and hence the moral right which springs from the performance of duty. It transforms unemployment from a period of idleness and homelessness into opportunity for useful work. . . . The work camp gives its members the satisfaction of performing useful work for the society which supports them. It *conquers the feeling of superfluity* which torments so many unemployed, and it preserves the pride which is unfortunately their only possession."

In their recommendations for adapting to American conditions the work camp idea as developed in Europe, the authors include, among other excellent proposals, the same idea that is repeated so often above: "First, we must deal with the more pressing needs for unemployment relief, always bearing in mind the ultimate goal which we are striving to attain. In the first place, we must realize that food, clothing, and shelter will never satisfy the urge which these young men have to do something useful, for they have discovered that *work is more important than play*. We must find constructive channels into which they can turn their energies and training. . . . Already in this country thinking citizens have come to the conclusion that work, not charity, is the only constructive form of relief. The only way in which a man's self-respect can be built up—not torn down."



## REVIEWS

*The Call for Leadership*: By Dr. H. S. Person. Published in the Taylor Society Bulletin for April, 1933.

Furnishing you a brief of this article by Dr. Person was suggested to me by the editorial on Forestry Leadership in the October number of the Journal of Forestry. Others besides foresters are thinking of leadership needs.

Dr. Persons assumes that we are familiar enough with the nature of leadership, so starts out by dividing leaders into two classes:

Leaders of action are also divided into two classes:

1. Leaders of research and thought.
2. Leaders of action as distinguished from research and thought. The need today is for leaders of action who can catch up with the leaders of thought.

1. That great group of leaders who carry on in every field of activity. Collectively they are essential, and individually many of them are outstanding in ability. Some of them start forces which in the long run modify institutions. Others merely co-ordinate the divided labors of others according to established patterns. In the aggregate their influence is enormous, and America has many of them.

2. Those occasional outstanding leaders who arise in times of social crises—Caesar, Charlemagne, Napoleon, Lincoln, Gandhi. Such geniuses of thought and action are able, not merely to carry on according to the established social pattern, but when the pattern is broken to gather up the scattered fragments and weld them together into a new functioning organic whole. It is leadership of this type with which we are now concerned. Assuming that our affairs have reached a point demanding this second type of leadership, why is it that it is so slow to emerge?

There are undoubtedly many factors in American institutions whose trend is against the development of leadership, or at least make its establishment difficult. Among these consider the following:

1. A century of opportunistic exploitation of a continent with only one real crisis. This culminated in the sectional conflict of seventy years ago. Since then there has been an easy industrial development demanding only the first type of action leadership. The World War was a crisis, but a minor one when compared to that which confronted Lincoln or that which confronts us now.

2. The relatively high standards of living realized by all social classes as a result of this resource exploitation has dimmed our perception until we are unable to recognize a social crisis during its early stages.

3. The size of the United States, with its diversity of resources, tends to emphasize local problems and to prevent our seeing any problems on a nation-

wide scale.

4. The influence of political democracy is against the emergence of leadership. Our so-called political leadership is too often like that of the dog which runs ahead of its master but with a weather eye constantly out to see which way its master is going. True leadership must risk something to modify the course of the lead.

5. Our political institutions, which emphasize the rights of parts (States) rather than the whole, do not tend toward the production of national leaders.

6. The nature of our industrial system is such that it is almost impossible for one of its unit leaders to acquire a collective point of view.

7. The educational system of the United States has not been the type that develops leadership. It, like industry, is designed for mass production, not individual excellence. In educating everybody the tendency is to make everyone fit the standard model.

In the following three paragraphs on "followship" I am quoting Dr. Person's exact words:

"I have considered at some length, although not exhaustively, why national leadership is so difficult to find in the United States. Another reason, so important that I consider it by itself, is a general incapacity among us for followship. There can be no leadership without followship; a leader can be a leader only if he represents—is inspired and sustained by—a following group. Before we can have really *national* leadership the people of the United States must become capable of thinking nationally, and of rallying behind one or another leader who sees the collective nature of our problems and of their solutions.

"Few of us are capable of thinking nationally. A diagnosis of the reasons for this would be essentially identical with our diagnosis of the reasons for scarcity of leaders. In fact, it is highly probable that if we as individuals had capacity for followship, leaders would automatically emerge when needed, for the conditions which promote effective followship likewise promote leadership. For reasons of convention I have set out to talk about the call for leadership when what I should have done was to label my address 'The Call for Followship.'

"Perhaps we can get first our followship and then as a by-product, our leadership, if more of us can be persuaded to recognize how real is our need."

The reason that the present situation is not considered merely a cyclic depression, such as we have had in the past, but a major national crisis, is that apparently there has been a fundamental break in the secular trend. Several new forces have come to focus during the past decade, the combined results of which have caused the break.

The first of these relates to population. There has been a very marked decrease in the rate of increase in population. At the same time the production



of social income has increased. This necessitates adjustments to maintain the flow of production-consumption forces. The second of these new forces relates to finance. Our system, as well as our standard of thinking, is based on our being a debtor nation. We are now a creditor nation, and apparently are having difficulties in recognizing the changes that this necessitates.

The third new force results from the increase in technology, which has multiplied many times our productivity. This necessitates new methods for the distribution of the social income. There are many other forces and mechanisms that are functioning badly, all of which tend to increase the break with the old and the necessity for the new.

Since these forces are all concerned primarily with industry, industry should find us the way out. The difficulties previously mentioned will probably prevent any one industrialist from having the necessary breadth of view and social-mindedness, but there is the possibility of a collective leadership from industry that will overcome these limitations. So great is our admiration as a people for the accomplishments of industry that the necessary followship would be automatic. It is industry's supreme opportunity—possibly also a responsibility and a challenge.

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As I said before, I was prompted to review this article by an editorial in the Journal of Forestry, and the similarity of the two in their contentions and demands. But in reviewing the one and in calling attention to the other I am not indicating that I agree with either. Neither is it my purpose to disagree. I have always tried to keep these discussions free from propaganda of any kind. We have studied together basic principles of management and methods and techniques for getting results. Are there any of these principles or techniques that will help us now?

Among other things, back in the winter of 1928-29 we had a lesson—lesson 3—on the technique of making a decision. On the basis that the present situation is important enough to demand an individual decision by each forester on this question of leadership—and followship, to include Dr. Person's additional idea—I am suggesting that we review this old lesson and follow the technique therein discussed.

Briefly that technique requires that first we assemble the facts that make up the situation, examine them and try to arrive at the crux of the problem or difficulty, just what is the trouble and what needs to be done. After that you formulate solutions and then compare and test them to determine which is the best or what results may be expected from each. For example, the editorial suggests a council to lead us out of our forestry difficulties. All right, what is there for or against this idea? Who would be chosen? How many would be satisfied with the choice? Whom could they lead? How many would follow? What is the probability that such a council could actually establish or maintain leadership? After testing this and all other proposals we finally arrive at our conclusion as to the best thing to do.

I have gone through this process myself and am not averse to giving you my decision, but would not ask you to accept it. It is much better that you make your own.

The present situation is such that it may possibly be considered a crisis, although I prefer to think of it merely as a period of rapid change. Things are happening and will happen. New ideas are developing, and there can be no going back to the old. To me the man who suggests that we go backward for our ideas has little conception of what is happening or the type of leadership needed.

That leadership is needed goes without saying; it is, always. But we have leadership. Has it failed? If so, where? Person has divided it into two types: first, thinker leadership, and second, active doing leadership. That the first type has failed I doubt. Is not thinking still ahead of action? Next, active leadership is divided into two parts: first, the leader who carries on, and second, the leader who can meet new conditions—crises. Again I think you will agree that we have had the first. As to the second, no one yet knows. The crisis is just upon us. It is too early to judge. But we all do know that it cannot succeed without “followship.” As Dr. Persons has said, no leadership can succeed at this time unless it is inspired and sustained by an active understanding sympathetic following group. That is why I quoted Person’s statement in full. Forester’s right now need to give more attention to followship.

For, believe it or not, leadership, be it good or bad, is bound to remain right where it is. It cannot be escaped. Possibly councils will be elected or groups come forward with proposals or claims, but leadership will go right on. Such things are not determined by appointments or agreements or statements of principles or titles. The “situation gives the order,” and it has so ordered.

I do not believe that I am influenced in this statement by my position, by my official contacts, or by my limited vision. It is discernible in the total situation. Examine it and see for yourself. And after you have determined this, then consider the next step—the duties and responsibilities of followship.—P. K.

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*The Development of Executive Talent:* By Dr. W. W. Charters, Director, Bureau of Educational Research, Ohio State University.

In this paper Dr. Charters has covered the whole field of executive training; but in my review I am emphasizing that part of his discussion dealing with “background training” and passing over some other parts without mention. I am doing this because I want to inject the idea of “background” into the subject proposed later for your discussion. Dr. Charters is an outstanding national leader in education, possibly the leader best known to industry. His paper is based on replies to a questionnaire from 112 firms. It should therefore represent both education and industry.



The modern point of view is that executives need special training, and that it is one of the most important functions of management to train them. Not so long ago many held the opinion that the best method was to assign tasks and leave it to the subordinate to work out his own salvation. This was supposed to develop the initiative and self-reliance of the young executive. The belief has never been verified. Today the assignment of duties without guidance is becoming obsolete. Executives are learning that they can delegate economically only as they train thoroughly. Assignment without specifications is futile and foolish. The bulk (4/5) of the training should be done on the job by the trainee's immediate superior.

This type of training learned on the job Dr. Charters calls "training in the technique of management," and distinguishes between them and the principles of management which may be learned from books. An author must deal in generalities which may be applied to many types of situations, while the trainer on the job deals with a specific situation or problem and a specific solution or method. The book or classroom type of instruction he calls "background." Executive training should involve both elements, the acquisition of background and the learning of techniques. It is a matter of common knowledge that an executive with a broad background is, other things being equal, more effective than one who has a limited background.

Managerial background may be of three types: First, there is what may be called the functional background. By that term is meant a background which is made up of the underlying principles and functions of business, a knowledge of the products of the company, and the place of the enterprise in the world of business. An executive with this functional background knows also the function of each of the divisions within the organization and understands something of marketing, production, distribution, and organization as they apply to his organization.

In addition to this functional background there is in many institutions a need for a technical background. By this is meant a familiarity with those processes which are carried on within the organization to produce whatever product it is that the company produces. For example, in the production of steel it is generally recognized that a young executive, even though he may have an engineering education, needs to know how the product is manufactured through all its steps and processes. For this reason it is the common practice in highly technical organizations to assign prospective executives to each division in turn in order that they may, in fact, master the essential techniques of each division and thereby acquire the necessary technical background.

That some background is needed all agree, but there is considerable difference of opinion as to how much. Also there is a difference between companies and products, and possibly also men. A junior sales executive should know something of production, but he need not stay in the production department long enough to become a skilled worker. It is ideas he wants from there, not skill. A junior in the finance department is more efficient if he knows something of sales, but it would be a waste of time for him to acquire skill

in selling. The only method suggested for determining the amount of technical background needed is through an analysis of what executives actually do on the job, but once this has been determined then provision should be made for him to acquire the information and understanding he needs.

The third element in executive background was not much stressed in the 112 questionnaires studied, but Dr. Charters says that it is of primary importance. This he calls personality background. By that he means a knowledge of people and an appreciation of their motives, their intentions, and their ambitions. This type of information can in part be learned from books, but to a large extent it is learned, if at all, from the rough-and-tumble contacts with people. One form of contact, not always available but sometimes very important, is contacts with big men. This is supplied in some companies by the manager discussing in an informal conversation the problems that confront the trainee.

A good many methods are used by different companies to develop the needed background in their executive prospects. Background is one of the principal reasons for employing college men; the college has given him a considerable background and has familiarized him with methods and opportunities for acquiring more. Schools or study courses are used either within or without the company. Some companies, in fact a good many, pay the tuition of their men who successfully complete a course in a good night school or correspondence school. One company reports that it paid out \$5,000 in this manner in 1927.

Company courses are considered better but more expensive. In addition to background, such courses furnish information about the business. They combine background with technique. The library offers another means of contributing to background that of late years is being given considerable attention. Company libraries are common, and in some cases carefully prepared courses of reading are furnished, with guides to indicate what to look for and how to study. Other companies secure the co-operation of the public library. Sometimes a branch is established in the company plant.

Everywhere more emphasis is placed on good reading than was formerly the case. Lectures are also used, but primarily for inspiration and as a help in adjusting one's point of view. Other methods are through conferences and executive organizations. But courses and lectures and classroom instruction will not produce a manager; he must have knowledge of the techniques of handling specific managerial problems. He must come in direct contact with managerial problems and be helped in acquiring the managerial point of view.

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As I said before, I am using this review as a means of injecting the background idea into the range discussion proposed in this lesson. What kind of background does the ranger need on a grazing district, and what steps do you take, if any, to see that he gets it? Dr. Charters says that he needs "a knowledge of his product," which in this case is forage. Also he needs a knowledge



of other branches than his own, including familiarity gained through an assignment to the other branches. Other branches with us would mean timber management, lands, etc., and, of course, the ranger belongs to them also. He handles all kinds of work. Further, he should know the processes by which his product is produced. On the range the product just grows, so I suppose that could mean the processes of growth, but more particularly I should think it might mean knowing how to manipulate the factors on the range so as to give the forage the best possible opportunity to grow, consistent with use. Also he should know the place of his product in the industry and in the world of business in general. And last and most important of all he should know "men and an appreciation of their motives, their intentions, and their ambitions."

Altogether this could be interpreted to include a mighty big order, or it might include only a very small one, depending on how much background of each of the three kinds you decide he ought to have. He is bound to have some, you know, by the time he reaches a district ranger assignment.—P. K.

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*Suggestions for Studying and Teaching Human Nature:* By Elliott Dunlap Smith, Department of Industrial Engineering, Sheffield Scientific School, Yale University.

Since I said in my "suggestions for discussion" that many people considered that the most important thing a range manager needs to know is men, I am reviewing this discussion by Dr. Smith on how to study them. Experience is a necessary part of the learning process, but we must not consider experience and learning as synonymous. None of us can escape experience.

To manage men requires understanding of them. Understanding requires that we know something of what has made them what they are; what characters are subject to development, and what are the common attributes called human nature. Whence the differences and whence the likenesses. The greatest common characteristic is man's ability to learn; from day to day and year to year he is molded by what he does and what he experiences.

Smith thinks that the study of books is an important help. His idea is that the book is not a thing apart but that it is based on and has grown out of actual experience and is capable of practical use. But most men, particularly practical men, have difficulty in bridging the gap between the teachings of the book and his own experience. Psychology is of value only as it can be applied to actual problems. Unless one gains some practice in the application of what he learns while he is learning it, he probably never will put it into practice.

"On this account the person who is studying human behavior as an aid to practical work will find it helpful, if, instead of merely studying a psychological book as such, he undertakes to study psychology from his own experiences, using the book as a guide. Since psychology is the science of human behavior, his own experiences, whatever they may have been, are sure to provide ample material for its study. To use a book in this way he will do well first to glance it over to get a general idea of what it is about, then take it section by section,

and after reading a paragraph or so, check what has been said by taking cases from his own experience and seeing if the principles that have been stated conform to the facts of life as he has experienced them. He should take plenty of time, for an understanding of psychology cannot be forced down, but requires leisure for absorption and rumination. To learn psychology in this way is, of course, easier and better fun if several people do it together.

“If a person uses a book in this way he will gain a thorough comprehension as he proceeds that will be of great help in understanding what follows. He will develop convictions of his own as to what in this book, and other books, is sound and important, and what is unsound or superficial. He will acquire, above all, the capacity, not merely to talk psychology, but to apply it to life.”

In teaching psychology to executives or prospective executives much the same method should be used. Cases or problems should be studied, and books used merely as helps in understanding the problems. Human behavior follows prescribed patterns and reactions. These reactions are not so well understood as chemical reactions, but well enough that general principles and guides have been developed. If you know a man well you know pretty well what he will do in a given situation. If you know him perfectly, you would know exactly what he would do. This in general is the behaviorist's theory. At the other extreme are those who believe that men choose their acts; that you can know nothing of what the choice will be. If this were really true, there could be no organized society or government. By studying cases, the responses of men in different situations, we learn to anticipate the response, and from that to control it by controlling or changing the situation. This is what is called managing men. Like music or mathematics, some seem to learn it naturally, with little effort, while others have difficulty in learning at all. The study of the principles and theories of books as checked against and tested by experience is to most of us the quickest and most interesting way to learn. Dr. Smith has had experience as an executive in industry as well as a teacher, and seems convinced from both experiences that the systematic study of men (psychology) is desirable for all executives or managers, and that books, if properly used, are a big help.

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I have introduced this brief review here just to round out the picture. A manager needs to know his job and the materials with which he works; in addition he needs a “background,” and in addition to that, some say above and beyond that, he needs to know men. Anything he needs to know should be systematically studied and learned. Further, the junior executive's immediate superior should encourage and help him in this study. Following Professor Smith's suggestion and applying it to our organization, the Supervisor can best help the ranger by discussing cases with him and helping him to discover motives governing action on the part of permittees. Then through the application of what has been learned, discuss new cases or problems and help him in anticipating actions or responses and preventing them if undesirable or preparing for them in advance. Such discussion cannot fail to help the ranger become a better manager.—P. K.



## SUGGESTIONS FOR DISCUSSION

A year ago in October we published a paper by Supervisor Clark on range specifications. On reading the discussions of that paper, particularly some that came in too late for publication, it seemed to me that as a follow-up we should inquire into the subject of what a range manager needs to know. By a manager, I mean a ranger, or a rancher managing his own range.

As you remember, one of the published papers advocates management only "by trained specialists," while another deprecates "so-called range experts" and "too much pseudo-science." One of the unpublished papers says that we are looking for a problem in calculus when it is only a matter of grade school arithmetic. The other extreme believes that the method "has not yet been simplified to meet the demand of the average man."

Which is right? I presume that neither is, and that the answer will be found somewhere between. Believing that the answer is important I have tried to get it for you from a number of experienced range men. Also, I have read everything I could find on or related to the subject. There is not as much uniformity of opinion as one would expect, and some, I fear, have not actually thought through the question, and therefore give meaningless answers. For example, when I am told that it is all "just a matter of experience," or that one "learns to judge proper utilization by experience" but not by rule or formula, I understand that what he really means is that he has not so analyzed his experience that he really knows what he has learned or what the factors are on which he bases his judgment. All information is based on experience. That which we read in books, as well as that told us by the old-timers was once unwritten, untold, unformulated, unorganized experiences. While in the beginning we may "know but not know how we know," we should not accept the idea that this will necessarily always be so. It is one function of research to so control experience that what it teaches may be formulated into definite usable information.

One idea quite commonly expressed is that a ranger needs most of all to know men; that in reality the ranger does not manage the stock or manage the range, but manages—or attempts to manage—the permittees. I pretty much agree with this. At least it has been my observation that the ranger who manages his permittees is rated pretty high as a range manager. However, he still needs to know his range in order to know just how to manage the permittees.

But for the present I want to pass over men and stock and confine our consideration to the range. Range management is, I suppose, pretty much like managing any other business. Henry Ford is credited with having said, not long ago, that he understood that to manage a business one ought to know something about it. So with the range, one ought to know something about it. However, in no business does the manager attempt to know all about it. He informs himself on the fundamentals and on general principles, then employs technical experts to furnish the specific details as needed. Ford himself employs hundreds of them in a dozen different lines.

Can this system be applied to the range? We have the technical experts, the best in the world (I have been told), so why not use them as Ford and other managers do, to furnish technical advice as needed, and let the ranger, I mean require the ranger, to learn the type of fundamental information that other managers find it advisable to know. By this system a ranger would not need to be a botanist. In fact it is better if he is not; being a botanist might sidetrack his interest and detract from the main job. Also, this method would satisfy both the extremes mentioned above. We would have both the expert, who knows the technicalities "beyond the average man," and the practical manager, who knows his objectives and gets things done. We would have both, each in his proper place, exercising his proper function and each co-operating with the other without friction.

There still remains for determination those fundamental facts and principles which the general manager should know. My interpretation of the prevailing opinion on this is somewhat as follows: The ranger should know his range. But first, he should know definitely his local objective in management. We are told that this may make a great deal of difference even in private business. Is the amount of forage of first importance, or economic values, or water, or social uses such as are expressed in recreation values? The general objective for all ranges is well stated in the Manual. The ranger should be familiar with this general statement and with its local application to each of his ranges. He should know not merely the words, he should know what the words mean in acts and results. Then he should know his topography, not as a topographer knows it, but in its relation to uses and activities in their relation to objectives.

Next he should know his soil; not in detail as the soil expert knows it, but in its capacities and capabilities more as the farmer knows it. He should know its general types, its origin and history, its productive value, and its susceptibilities to erosion or other deteriorating agencies. He needs to know it in relation to its cover, its dependence on its cover and what the effect is of such denuding agencies as fire and over-use.

And of course he should know his crop. He needs to know not only the forage crop but the vegetation, or cover in general, whether of forage value or not. He should know and distinguish between a natural cover and one which has been modified by external agencies, such as fire and over-grazing. When I say he should know his forage, I mean he should know the bulk of it, say 80 or 90 per cent by volume. There are hundreds of scattered plants which he may neglect. And when I say know, I mean that he should recognize them, not as the botanist does in their relations as to origin and development, but in their relations to soil, moisture, and forage value, their methods of propagation and the extent to which they will thrive under grazing use. As an example, there are some fifteen or twenty botanical species of small dry-land unpalatable Senecios. There is no advantage to the ranger in being able to recognize and name each species, but there is an advantage in his knowing them as a group of unpalatable dry-land weeds. Knowing them as Senecios apparently has



some advantage; at least a good many think so but some do not. The point is that the range manager should use botanical terms and classifications, not because they are botanical, but because they are of use to him as a manager, and only when they are of use. There is no more reason that the ranger should know the botanical classification and name of his oat grass than there is that the farmer should have the same information about his oats. The successful farmer learns all the things about oats that he can use. If we adopt the same standard for the ranger it will not be difficult to agree rather closely as to what he should know.

In addition to knowing the soil and its cover, he should know the history of his range as a range. He should know how long it has been used; how many stock it has carried, and what kind; what has been the condition of the stock and the effect on the range? He should know the probable results to be expected from over-use and the probable rate of recovery from under-use. He should know definitely the degree of utilization that is considered allowable on each of his ranges, and have a definite method of recognizing it or when it has been passed, and a standard method for reporting it.

Further, he should know something of the ecology of his range. He should know and recognize the typical plant associations and communities and the edaphic factors on which they depend. He needs to know something of plant succession and the eternal struggle of plants for space. He needs to know and recognize in the field the workings of the elemental ecological forces, but needs not to acquire the techniques of the research worker.

Neither do I mean to imply that he should subscribe to the theory that the natural, the wild range is necessarily the highest type of range. Would it not be like claiming that the wild apple is necessarily the best? By manipulation man has improved the apple. By manipulation of factors on the range he can improve it—manage it.

The foregoing statement represents pretty much a minimum; some would include a great deal more. But our weakness has not been so much in recognizing what is needed as in requiring it. The consensus of opinion seems to be that these minimum requirements should be formulated as definitely as possible and then *required*. This would of course necessitate that the rangers each be given time and opportunity to meet the requirements. It should apply to all ranger districts where the forage is important whether it is used by domestic stock or by wild animals. It would not prevent a ranger from knowing more. Most of them now do know more, but some know less. This is a reflection on the Service and its reputation for efficiency. Why should it be allowed to continue after twenty-eight years of range management? For example, an inspector examined an allotment chosen by the ranger and supervisor as one representing good range conditions. The inspector found many things indicating the progress of deterioration. Neither ranger nor supervisor was new to the job. Why did they not know? For my part I do not criticize either the individuals or the G Branch, but must there not be something wrong some-

where with our methods? Could there not be a set-up that would automatically prevent such examples or situations?

My conclusions from what I have read and what I have been told, given in a general way above, are more specifically as follows:

1. Too many rangers, even after all these years, do not know their ranges as a manager should.

2. The acceptable minimum that a ranger manager should know should be, but never has been, definitely defined and required.

3. In determining this required set-up, usability should be the criterion. Analyze the jobs in the ranger's work plan and determine from that what he needs to know, what he can actually use in doing the job. Require nothing that he does not need or cannot use.

Discuss these conclusions. Do you agree with all or with any of them? If not, why not, and if you do, how is the best way of setting about putting what they stand for into effect? Possibly I should explain that by "required" in 2, I mean required as expressed in his work, not required as expressed in a school-room recitation or an examination.

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The subject discussed by Mr. Loveridge is to me a very important one. It deals with a basic urge of human nature—the necessity for keeping one's self-respect and a feeling of worth-whileness. This is the thing that Whiting Williams has emphasized so many times in so many ways to employers; that men are not primarily interested in ease and comfort, in being well-fared. They, first of all, like to accomplish, to beat the record, to be recognized as a person or as one of a group that does things. If a young man cannot get this recognition and opportunity in his work, he joins a "gang." According to inspection reports he has been forced to do this in a mild way in some of the camps. For you know men cannot just take it easy, enjoy the comforts of camp life and exist. Providence did not make them that way.

And speaking of inspection reports, I have seen a good many. Since some inspector, in Region 1, I believe, tied work and morale together I have been noticing. Almost invariably when the report says good work and good discipline, it says also good morale. If the work is reported as below standard, so is the morale. Which is cause and which is effect? I wish someone would analyze some three or four hundred reports and give us an authoritative answer. I am not asking for a discussion now, but also I hope the question will not be dropped. Seems to me there is in these camps an opportunity to get data on an important managerial subject. Wish Research could be interested.—P. K.

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NOTE: Only a few replies have been received from last month's discussion. All so far are unfavorable to the ranger at headquarters.





